Section 1. Registration Information

Source Identification

Facility Name:	Brick Township Municipal Utilities Authority
Parent Company #1 Name:	
Parent Company #2 Name:	

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	Revised PHA / Hazard Review due to process change (40 CFR 68.190(b)(5))
Description:	
Receipt Date:	04-Oct-2021
Postmark Date:	04-Oct-2021
Next Due Date:	04-Oct-2026
Completeness Check Date:	04-Oct-2021
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0006 9748
Other EPA Systems Facility ID:	NJD982720179
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	
Parent Company #1 DUNS:	
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	1551 Highway 88 West
Street 2:	
City:	Brick
State:	NEW JERSEY
ZIP:	08724
ZIP4:	2399
County:	OCEAN

Facility Latitude and Longitude

Latitude (decimal):	40.076785
Longitude (decimal):	-074.141692
Lat/Long Method:	Interpolation - Map
Lat/Long Description:	Storage Tank
Horizontal Accuracy Measure:	1
Horizontal Reference Datum Name:	North American Datum of 1983

Source Map Scale Number:	1200

Owner or Operator

Operator Name:	Brick Township Mun. Util. Auth.
Operator Phone:	(732) 458-7000

Mailing Address

Operator Street 1:	1551 Highway 88 West
Operator Street 2:	
Operator City:	Brick
Operator State:	NEW JERSEY
Operator ZIP:	08724
Operator ZIP4:	2399
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	Joseph Maggio, P.E.
RMP Title of Person or Position:	Director of Water Quality
RMP E-mail Address:	jmaggio@brickmua.com

Emergency Contact

Emergency Contact Name:	John Rouse
Emergency Contact Title:	HazMat Incident Commander
Emergency Contact Phone:	(732) 458-7000
Emergency Contact 24-Hour Phone:	(848) 223-3951
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	jrouse@brickmua.com

Other Points of Contact

Facility or Parent Company E-mail Address:	
Facility Public Contact Phone:	
Facility or Parent Company WWW Homepage Address:	www.brickmua.com

Local Emergency Planning Committee

LEPC:	Brick Township OEM

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	147
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes
EPCRA 302 :	Yes

CAA Title V:
Air Operating Permit ID:

OSHA Ranking

OSHA Star or Merit Ranking:

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	25-Aug-2021
Last Safety Inspection Performed By an External Agency:	State environmental agency

Predictive Filing

Did this RMP involve predictive filing?:

Preparer Information

Preparer Name:
Preparer Phone:
Preparer Street 1:
Preparer Street 2:
Preparer City:
Preparer State:
Preparer ZIP:
Preparer ZIP4:
Preparer Foreign State:
Preparer Foreign Country:
Preparer Foreign ZIP:

Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidents reported for this RMP.

Process Chemicals

Process ID:	1000115514
Description:	Chlorination System
Process Chemical ID:	1000144434
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	10000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process NAICS

Process ID:	1000115514
Process NAICS ID:	1000116965
Program Level:	Program Level 3 process
NAICS Code:	22131
NAICS Description:	Water Supply and Irrigation Systems

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000093443

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000099335

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	Areal Locations of Hazardous Atmospheres [ALOHA(R)]
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	Yes
Emergency Shutdown:	
Other Type:	Emergency Response Equipment and Repair Procedures

Section 4. Flammables: Worst Case

No records found.

Section 5. Flammables: Alternative Release

No records found.

Section 6. Accident History

No records found.

Section 7. Program Level 3

Description

The Brick Township Municipal Utilities Authority's prevention program consists of seventeen (17) different areas of risk management. A detailed explanation of these elements is included in this report's "Executive Summary".

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000123897
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Process ID:	1000115514
Description:	Chlorination System
Prevention Program Level 3 ID:	1000098839
NAICS Code:	22131

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	30-Sep-2021

Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	30-Sep-2021

The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	
Failure Mode and Effects Analysis:	Yes
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	30-Sep-2021

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	
Corrosion:	
Overfilling:	
Contamination:	
Equipment Failure:	Yes

Loss of Cooling, Heating, Electricity, Instrument Air:	
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	Container Mishandling; Employee Operating Error.

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	
Manual Shutoffs:	Yes
Automatic Shutoffs:	
Interlocks:	
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	
Grounding Equipment:	
Inhibitor Addition:	
Rupture Disks:	
Excess Flow Device:	
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	Yes
Neutralization:	
None:	
Other Mitigation System in Use:	Chlorine Gas Scrubber

Monitoring/Detection Systems in Use

Process Area Detectors:	Yes
Perimeter Monitors:	
None:	
Other Monitoring/Detection System in Use:	Portable Electrolytic Chlorine Detectors

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	

Change Process Parameters:	
Installation of Process Controls:	
Installation of Process Detection Systems:	
Installation of Perimeter Monitoring Systems:	
Installation of Mitigation Systems:	Yes
None Recommended:	
None:	
Other Changes Since Last PHA or PHA Update:	

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):	30-Sep-2021

Training

Training Revision Date (The date of the most recent review or revision of training programs):	30-Sep-2021

The Type of Training Provided

Classroom:	Yes
On the Job:	Yes
Other Training:	

The Type of Competency Testing Used

Written Tests:	
Oral Tests:	
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	Question and Answer Session after Classroom Training

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures):	30-Sep-2021
Equipment Inspection Date (The date of the most recent equipment inspection or test):	15-Jul-2021
Equipment Tested (Equipment most recently inspected or tested):	Chlorine alarm and personnel alert/emergency response system test. Chlorine Room Components inspected on a Daily Basis (5 times per week).

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures):	28-Feb-2019

Change Management Revision Date (The date of the most recent review or revision of management of change procedures):	30-Sep-2021

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review):	30-Sep-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit):	25-Aug-2021
Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit):	

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)):	29-Jul-2017
Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation):	29-Jul-2017

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans):	30-Sep-2021

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures):	30-Sep-2021

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures):	30-Sep-2021
Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance):	30-Sep-2021

Confidential Business Information

CBI Claimed:	

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):	Yes
Facility Plan (Does facility have its own written emergency response plan?):	Yes
Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):	Yes
Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?):	Yes
Healthcare (Does facility's ER plan include information on emergency health care?):	Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan):	30-Sep-2021

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees):	13-Sep-2021

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated):	Brick Emergency Management Office
Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):	(732) 262-1100

Subject to

OSHA Regulations at 29 CFR 1910.38:	Yes
OSHA Regulations at 29 CFR 1910.120:	Yes
Clean Water Regulations at 40 CFR 112:	Yes
RCRA Regulations at CFR 264, 265, and 279.52:	
OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:	
State EPCRA Rules or Laws:	Yes
Other (Specify):	New Jersey Department of Environmental Protection - Toxic Catastrophe Prevention Act (N.J.A.C. 7:31)

Executive Summary

Brick Township Municipal Utilities Authority (BTMUA) has developed and implemented an accidental release prevention program for the hazardous substance identified below.

LOCATION: Main Facility - Chlorination Process Hazardous Substance:

CHLORINE STORAGE AND SUPPLY: Chlorine cylinders are connected to vacuum regulators, rotometers and water vacuum ejectors. The system is completely under vacuum. If the vacuum is lost for any reason, a spring loaded valve on each of the regulators immediately closes to stop the flow of chlorine gas. The chlorine storage system is monitored by two independent leak detection systems. An active mitigation system, consisting of a chlorine emergency gas scrubber, is incorporated to control chlorine gas releases to the environment from the chlorine room.

Listed below is a brief description of BTMUA's risk management program as it pertains to the location detailed above.

MANAGEMENT SYSTEM
1. The goal of BTMUA's Risk Management Program (RMP) is to reduce the risk to employees and the public of injury or death from accidental release of chlorine. BTMUA's delineation of this RMP element details responsibilities which involve Directors and Supervisors.

PROCESS SAFETY INFORMATION
2. BTMUA's RMP includes chlorine information on its toxicity, physical data, permissible exposure limits, reactivity data, corrosivity data, and thermal and chemical stability data. Information concerning the chlorination process chemistry, maximum inventory, safe upper and lower limits for temperature, pressures and flows or compositions, evaluation of consequences of deviations, piping and instrumentation diagram, materials of construction, electrical classification, ventilation system design, design codes and standards, safety systems, electrical one-line diagram, site plan, fire and sewer water system piping diagrams and external forces and events data are included in this element. The Director of Water Quality has overall responsibility for maintaining and implementing this RMP element in conjunction with the Water Treatment Plant Operations and Maintenance Supervisor and the Director of Compliance & Technology.

PROCESS HAZARD ANALYSIS (PHA)
3. BTMUA has conducted Chlorination Process Hazard Analysis to identify, evaluate and control the risk associated with the hazards of the chlorination process. Process Hazard Analysis Documentation includes analysis reports, dispersion modeling reports, action timetables and a record of meetings held in which process hazard analysis results are communicated. The Director of Water Quality implements the PHA planning in coordination with the Water Treatment Plant Operations and Maintenance Supervisor and the Director of Compliance & Technology. These PHA's are conducted and thoroughly reviewed and revalidated at least every five (5) years following the completion of the initial report by an in-house hazard analysis team. The PHA alternate scenario analysis incorporated the Authority's chlorine gas scrubber as an active mitigation method. The scrubber resulted in no off-site impacts, based on the scrubber's design discharge specifications of less than 1 ppm of chlorine gas released to the atmosphere. It is noted that the PHA alternate scenario data entered in Section 3 does not allow chlorine release rates and distance to endpoint below 0.1 lbs/minute and 0.01 miles, respectively. The actual mitigated chlorine release rate is 0.0000207 pounds/minute. The actual distance to endpoint is 0.006 miles, although 0.01 miles is still within the property limits.

STANDARD OPERATING PROCEDURES (SOP'S)
4. The purpose of this RMP element is to ensure that BTMUA maintains up-to-date accurate, written SOP's that provide clear instructions for our chlorination system. All procedures will contain simplified operating instructions as well as any attachments. These procedures are reviewed annually to certify that they accurately reflect current operating practice. Any revisions to SOP's that include changes in our process chemical, technology and equipment and facility changes will be addressed in our management of change. The Water Treatment Plant Operations and Maintenance Supervisor has overall responsibility for implementing this element in coordination with the Director of Compliance & Technology.

EXTRAORDINARILY HAZARDOUS SUBSTANCE (EHS) OPERATOR TRAINING
5. The purpose of this RMP element is to ensure that BTMUA employees who work on or near the chlorination system process are adequately trained and understand the inherent process hazards and what appropriate response actions to take in case of an accidental chlorine release. This training consists of classroom and hands-on formats. Refresher training is given periodically

throughout the year based on regulatory requirements and operational need basis. Training records are monitored and maintained by the Compliance & Safety Office. The Director of Water Quality, the Director of Compliance & Technology, and Water Treatment Plant Operations and Maintenance Supervisor share overall responsibility for developing and maintaining this RMP Element.

MECHANICAL INTEGRITY/PREVENTATIVE MAINTENANCE (P/M)

6. The purpose of this RMP element is to ensure the continued integrity of all the chlorination process equipment. The BTMUA PM Program identifies the direct and indirect EHS equipment as well as establishing, following and maintaining maintenance, inspection and testing schedules for this equipment. BTMUA maintains a comprehensive asset management program and capital improvement plan to promote responsible maintenance, investment and rehabilitation to the Authority's water system. BTMUA enforces strict adherence to best management practices with reference to good housekeeping, preventative maintenance, and routine condition inspection. The Water Treatment Plant Operations and Maintenance Supervisor has the overall responsibility for implementing this RMP Element.

MANAGEMENT OF CHANGE

7. The purpose of this RMP is to ensure that BTMUA's chlorination process system changes are properly reviewed against original system design specifications. This is to determine that these changes can be accomplished safely and the chlorination system is ready to operate safely in accordance with original system design intent following the implementation of the change. Included in this element is document review, PHA development, employee training and record keeping. The Water Treatment Plant Operations and Maintenance Supervisor has the overall responsibility for this element in coordination with the the Director of Compliance & Technology.

PRE-STARTUP SAFETY REVIEW (PSSR)

8. Should any new processes regulated under OSHA Process Safety Management and EPA/TCPA RMP regulations be introduced into BTMUA operations, a PSSR will be performed to ensure that this Authority is ready to safely operate these new procedures or to assure that everyone can successfully and safely carry out any modification to the main facility chlorination process. The Director of Engineering is responsible for administering this RMP element in coordination with the Director of Water Quality, Water Treatment Plant Operations and Maintenance Supervisor, the Director of Compliance & Technology.

COMPLIANCE AUDITS

9. The purpose of this RMP element is to ensure audits are performed to evaluate that BTMUA's chlorination process safety and risk management programs, and their implementation for compliance with the OSHA Process Safety Management and EPA/TCPA Risk Management Program Regulations. This audit is completed annually under the direction of the Director of Water Quality in coordination with the Water Treatment Plant Operations and Maintenance Supervisor, and the Director of Compliance & Technology.

ACCIDENT INVESTIGATION

10. All chlorine leak accidents or potentially catastrophic events at the Authority will be promptly investigated. The purpose of the accident investigation element is to identify the underlying causes of an accident and to implement corrective actions to prevent the accident from reoccurring. The Water Treatment Plant Operations and Maintenance Supervisor is responsible for initiating this RMP element and ensures that any resulting corrective actions are addressed and documented.

EMPLOYEE PARTICIPATION PLAN

11. BTMUA recognizes that it is essential to involve its employees in the development and implementation of an OSHA PSM and EPA/TCPA RMP. The purpose of this plan is to define how employees will be involved. In each element of the RMP the Director of Water Quality has overall responsibility for maintaining and implementing this plan.

HOT WORK PERMIT

12. The purpose of this element is to ensure that a hot work permit is issued for all hot work operations conducted near the main facility chlorination system processes. Hot work is defined as any work that many generate a source of ignition and includes but is not limited to welding, torch cutting, and use of spark producing equipment. The Water Treatment Plant Operations and Maintenance Supervisor is responsible for hot work permit procedures.

CONTRACTOR SAFETY

13. The purpose of this element is to ensure that only contractors with good health and safety programs are selected to perform

work on and around the main facility chlorination process, and that the contractors and the process are properly prepared to safely complete the work. The Director and Supervisor in charge of employing the contractor and the Director of Compliance & Technology share jointly in the implementation of this RMP element.

EMERGENCY PLANNING AND RESPONSE

14. The purpose of this element is to ensure that BTMUA maintains up-to-date and complete written emergency action plans (EAP's) and effective response capabilities for the main facility chlorination process. Comprehensive emergency action plans, when combined with emergency response training and drills, can effectively minimize the impact of an accidental release by ensuring proper and quick facility response.

BTMUA's Emergency Response Program was designed and updated according to the EPA's Integrated Contingency Plan Guidance. This ER Plan defines the response organization, coordination with Brick Township and Ocean County Office of Emergency Management Offices, equipment, response procedures, training, notification procedures and drills. The Director of Water Quality and the Director of Compliance & Technology will be responsible for implementing and maintaining the procedures in this RMP element. The ER Plan is updated according to recommendations resulting from system deficiencies uncovered by the periodic drills or incidents. All incidents are investigated to determine root cause and system deficiency correction. BTMUA has experienced no reportable accidents in the past five years. Additionally, operator refresher and system update training are conducted in compliance with our operator training program. The preventive maintenance program conducts scheduled system inspections and maintenance to assure the proper operation of process and leak detection devices. Management of change is monitored by the Director of Water Quality to assure that this program stays current and implemented according to industry accepted standards for design and operation.

The chlorination system is currently state of the art for design and operation. An Inherently safer technology (IST) review was initially conducted in 2008 and updated in 2012, 2017 & 2021 to identify alternatives to minimize the potential for a chlorine release. As discussed above, the Authority installed a chlorine gas scrubber which was officially brought on line in September 2021.

BTMUA has completed a vulnerability assessment in accordance with the Bioterrorism Act of 2002 and subsequently completed a Risk and Resilience Assessment in accordance with the America's Water Infrastructure Act of 2018. These assessments were conducted by consultants specializing in water utilities security and applicable Authority representatives including staff from the water treatment facility. Selected recommendations have been incorporated to protect personnel, property and the integrity of the chlorination system. BTMUA also periodically evaluates the physical security and resilience items outlined in these assessments and actively incorporates relevant improvements in the capital improvement plan.

ANNUAL REPORTS

15. The purpose of this element is to ensure that BTMUA submits an annual report to the NJDEP reflecting the risk management activities for the 12 month period ending on the anniversary date within 90 days of the anniversary date. Annual reports are required to be submitted to the NJDEP on all TCPA RMP regulated processes, the main chlorination facility being that process for the BTMUA. The Director of Compliance & Technology is responsible for completing this report with assistance from the Director of Water Quality.

TEMPORARY DISCONTINUANCE OF EHS USE, STORAGE AND HANDLING

16. The purpose of this element is to ensure that if BTMUA temporarily discontinues using, storing, handling and generating chlorine in the covered process (main facility chlorination process) or temporarily stores it at less than threshold quantity (1,000 lbs.), it shall continue activities required by the TCPA RMP regulation until the date a consent agreement or consent agreement addendum, that is signed by BTMUA, is signed by the NJDEP. The Director of Water Quality, Water Treatment Plant Operation and Maintenance Supervisor, and the Director of Compliance & Technology will be responsible for implementing this element.

NEW COVERED PROCESSES

17. The purpose of the element is to ensure that if BTMUA constructs or add a new EHS service that falls under Program 3, the necessary approvals and documentation are completed prior to any EHS startup. The Director of Water Quality, Water Treatment Plant Operation and Maintenance Supervisor, and the Director of Compliance & Technology will be responsible for implementing this element.